**Unit 1 Map – Ecology**

AP Biology

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| **Topic** | **Learning Target** | **Checkpoint Score %** | **Test Score %** |
| 1. Population and Community Ecology | A. I can describe patterns of growth within populations and use population growth equations. |  |  |
| B. I can compare / contrast the methods scientists use to determine the size of a population—the quadrant technique and the mark and recapture technique. |
| C. I can explain how energy is transferred between different trophic levels in a community (i.e. analyzing and creating food webs). |
| D. I can compare / contrast the different types of symbiotic relationships between species in a community (ex: mutualism, commensalism, parasitism, predation, competition) |
| E. I can describe the effects of changes to a community (ex: loss of a keystone species). |
| 2. Ecosystems | F. I can identify the different levels of ecological organization and provide examples of biotic and abiotic factors in an ecosystm. |  |  |
| G. I can distinguish between the two types of ecological succession—primary and secondary. |
| H. I can describe the strategies that organisms use to regulate their use of free energy (ex: endothermy and ectothermy). |
| I. I can describe the effects of various human activities (ex: introduction of invasive species) and geological / meteorological events (ex: El Nino) on ecosystems. |
| 3. Biogeochemical Cycles | J. I can explain howcarbon, water, nitrogen, phosphorus, and sulfurare cycled between living organisms and the non-living components of their environment. |  |  |
| 4. Timing and Coordination | K. I can describe how living organisms respond to environmental cues to coordinate physiological events (ex: photoperiodism in plants and circadian rhythms in animals) |  |  |
| L. I can describe how the coordination of behaviors in organisms can be an advantage in natural selection. |